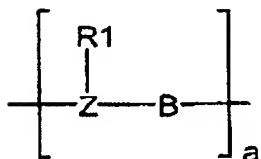


Claims

1. Water-soluble aminoplast ether copolymers of the following structural type:

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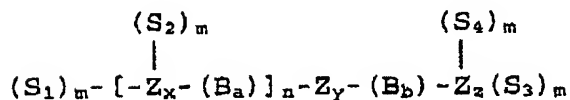
where

10 Z is an aminoplast unit based on a glycoluril which is unsubstituted or substituted by a reactive OR group (where R is an alkyl, alkylene, alkyl ether or alkyl ester group, preferably a lower alkyl group, e.g., a methyl or ethyl group);
15 B is the radical of an essentially water-insoluble polymer selected from poly-n-butyl acrylate, poly-n-butyl methacrylate, polyethyl acrylate, polytetrahydrofuran, polyethyl methacrylate, polymethyl acrylate, polymethyl methacrylate, a predominantly aliphatic
20 polycarbonate or a predominantly aromatic polycarbonate, and more preferably from a poly-n-butyl methacrylate or a predominantly aliphatic or aromatic polycarbonate having at least two functional groups which are able to react with the
25 OR function of the aminoplast unit, preferably having a hydroxyl function;
R1 is the radical of a hydrophilic organic compound containing at least one functional group which is able to react with the OR function of the
30 aminoplast unit to form an ether bond, preferably having a hydroxyl function, and
a is at least 1.

2. Aminoplast ether copolymers of claim 1, characterized in that the molar ratio R1:B is greater than 1, preferably from about 1.5 to 4.
- 5 3. Aminoplast ether copolymers of claim 1 or 2, characterized in that R1 is the radical of methylcellulose, polyacrylic acid, polymethacrylic acid, ethylene/acrylic acid/sodium acrylate copolymer, polyalkylglycol, polyvinyl alcohols or
10 polyvinylpyrrolidone, preferably the radical of a methoxy-terminated polyalkylglycol.
4. Aminoplast ether copolymers of one of the preceding claims, characterized in that at least
15 one side chain R1 is water-soluble and connected via an ether bridge to the central unit Z.
5. Aminoplast ether copolymers of one of the preceding claims, characterized in that the
20 reactive OR group is selected from the group consisting of alkylol, alkyleneol, alkylol ethers and/or alkylol esters.
6. Aminoplast ether copolymers of one of the preceding claims, characterized in that the
25 reactive OR group is a methoxy group.
7. Aminoplast ether copolymers of one of the preceding claims, characterized in that R1 has a
30 molar mass of from about 500 to 30 000 g/mol, in particular from about 1000 to 20 000 g/mol, more preferably from about 1500 to 10 000 g/mol.
8. Aminoplast ether copolymers of one of the preceding claims, characterized in that B has a
35 molar mass of from about 100 to 30 000 g/mol, in particular from about 200 to 20 000 g/mol, more preferably from about 300 to 10 000 g/mol.

9. Aminoplast ether copolymers of one of the preceding claims, characterized in that their overall molar mass is from about 1000 to 100 000 g/mol, in particular from about 2000 to 50 000 g/mol, more preferably from about 2500 to 40 000 g/mol.
10. A process for preparing an aminoplast ether copolymer of one of claims 1 to 9, characterized in that the aminoplast unit Z are reacted with the organic compounds B and R1 as defined in one of claims 1 to 8 and/or with prepolymers formed therefrom under acidic catalysis in solution or without solvent, preferably in a one-pot process.
11. The process according to claim 10, characterized in that the reaction is carried out in a one-pot process in from 15% to 35% strength solution in respect of monomers used (total reactants), in particular in from 20% to 30% strength solution at 70 to 130°C, and after a reaction time of from about 2 to 10 h, preferably from 2.5 to 8 h, a neutralizing agent, e.g., an amine, is added in order to obtain molar masses of the copolymers of from about 2000 to 50 000 g/mol, more preferably from about 2500 to 40 000 g/mol.
12. Aminoplast ether copolymers obtainable by the process according to claim 10 or 11.
13. The use of an aminoplast ether copolymer of one of claims 1 to 9 or prepared according to claim 10 or 11 as dispersant or stabilizer for pigments or fillers.
14. The use of claim 13, characterized in that the dispersant or stabilizer is used in aqueous systems.

15. The use of an aminoplast ether copolymer of one of claims 1 to 9 or prepared according to claim 10 or 11 for the viscosity stability of pigment pastes, for avoiding flocculation and aggregation, for increasing the color strength and/or for improving the water resistance of the coating produced from the paste.
16. The use of one of claims 13 to 15, characterized in that the aminoplast ether copolymer is used in paints or varnishes.
17. The use of one of claims 13 to 16 for preparing pigment concentrates.
18. The use of claim 16, wherein the aminoplast ether copolymer is homogenized together with the pigments and/or fillers to be dispersed, optionally in the presence of organic solvents and/or water, optionally with binders and optionally with customary coatings auxiliaries.
19. The use of one of claims 13 to 18 for preparing a coating composition, for which a binder, optionally a solvent, pigments and/or fillers, the aminoplast ether copolymer and optionally auxiliaries are dispersed together.
20. The use of a water-soluble graft polymer or graft copolymer of the structural type



in which (B_a) to (B_b) are predominantly apolar base polymer chains which are identical or different from one another and which optionally have free

valences for the formation of a crosslinked structure; Z_x to Z_z are central units which are identical or different from one another and which optionally have free valences for the formation of a crosslinked structure; (S_1) to (S_4) are polar or apolar side chains which are identical or different from one another; $m = 1$ to 100 , preferably 2 to 50 , in particular 2 to 20 , and n is an integer from 0 to 500 , and the structure is completed by polar end groups as a dispersant or stabilizer for pigments or fillers, for the viscosity stability of pigment pastes, for avoiding flocculation and aggregation, and/or for increasing the color strength and also the water resistance of the coating produced from the paste.

21. A pigment paste comprising a pigment, a solvent and an aminoplast ether copolymer of one of claims 1 to 9 , prepared according to claim 10 or 11 , or a graft polymer or graft copolymer, as defined in claim 20 , as dispersant.

22. The pigment paste of claim 21 , comprising a water-containing solvent and if desired a cosolvent, a defoamer and/or a wetting agent.

23. The pigment paste of claim 21 or 22 , characterized in that other than the aminoplast ether copolymer of one of claims 1 to 9 , prepared according to claim 10 or 11 , or the graft polymer or graft copolymer, as defined in claim 20 , there is essentially no other dispersant present.